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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,245	09/12/2003	Bhashyam Ramesh	NCR 11092	8704

7590 04/17/2007

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EXAMINER	
CORRIELUS, JEAN M	
ART UNIT	**PAPER NUMBER**
2162	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/661,245	RAMESH ET AL.	
	Examiner	Art Unit	
	Jean M. Corrielus	2162	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is office action is in response to the Request for Continued Examination (RCE) filed on April 4, 2007, in which claims 1-12 are presented for further examination.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 4, 2207 has been entered.

Response to Arguments

3. Applicant's arguments filed April 4, 2007 have been fully considered but they are not persuasive. (See Examiner's remark).

Remark

Applicant asserted that the 35 USC 101 with respect to claims 6-7 should be removed because the claimed invention does provide a concrete and tangible result. The examiner disagrees with the precedent assertion. It is noted, however, that claim 6, lines 5-7 does not provide a concrete and tangible result to form the basic statutory subject. On the other hand, it appears that the step of clustering the string with a cluster associated with the Y+1 n-grams Ts-Tuy is not tangible result to form the basis statutory subject matter under 101. Applicant should duly note that the tangible requirement does not necessarily mean that a claim must either be tied to a particular

machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement requires that the claim must set forth a practical application of that judicial exception to produce a real-world result. Furthermore, the claim 6 appears to have no claimed result under the condition when the string is not associated with the cluster, nor when the frequency of Ts in a set of n-gram statistic is greater than a first and second threshold. Therefore, the aforementioned is moot, refer to the rejection below.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-12 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter, specifically, as directed to an abstract idea.

Claims 1 and 10 recite "clustering the string with a cluster associated with a n-gram, otherwise: do nothing". Such limitation of the claimed is directed to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a useful result to form the basis of statutory subject matter under 35 U.S.C. 101. Applicant is advised to distinguish the claims

from the three 35 U.S.C. 101 judicial exceptions to patentable subject matter by specifically reciting in the claim the practical application. Applicant should duly note that in order for a claimed invention to be useful, it must be satisfy the utility requirement under section 101, which the claimed invention has to be specific, substantial and credible. Thus, the claims fail to produce

a useful result to form the basic statutory subject matter under 101.

Claims 1 and 10 recite "clustering the string with a cluster associated with a n-gram, otherwise: do nothing". Such limitation of the claim does not produce a tangible result. Applicant should duly note that the tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement requires that the claim must set forth a practical application of that judicial exception to produce a real-world result. For the analysis provided above, claims 1 and 10 fail to produce a tangible and useful result to form the basis statutory subject matter under 35 USC 101.

The dependent claims 2-3 and 11-12 are rejected for fully incorporating the errors of their respective base claims by dependency.

Claim 4 recites "clustering each string with zero or more clusters associated with low-frequency pairs of high frequency n-grams from that string". Such limitation of the claim is directed to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a useful result to form the basis of statutory subject matter under 35 U.S.C. 101. Applicant is advised to distinguish the claim from the three 35 U.S.C. 101 judicial exceptions to patentable subject matter by specifically reciting in the claim the practical application. Applicant should duly note that in order for a claimed invention to be useful, it must be satisfy the utility requirement under section 101, which the claimed invention has to be specific, substantial and credible. Thus, the claim fails to produce

a useful result to form the basic statutory subject matter under 101.

Claim 4 recites "clustering each string with zero or more clusters associated with low-frequency pairs of high frequency n-grams from that string". Such limitation of the claim does not produce a tangible result. Applicant should duly note that the tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement requires that the claim must set forth a practical application of that judicial exception to produce a real-world result. For the analysis provided above, claim 4 fails to produce a tangible and useful result to form the basis statutory subject matter under 35 USC 101.

The dependent claim 5 is rejected for fully incorporating the errors of their respective base claims by dependency.

Claim 6 recites "clustering the string with a cluster associated with the Y+2 n-gram group ". Such limitation of the claim is directed to an abstract idea that is not tied to a technological art, environment or machine which would result in a practical application producing a useful result to form the basis of statutory subject matter under 35 U.S.C. 101. Applicant is advised to distinguish the claim from the three 35 U.S.C. 101 judicial exceptions to patentable subject matter by specifically reciting in the claim the practical application. Applicant should duly note that in order for a claimed invention to be useful, it must be satisfy the utility requirement under section 101, which the claimed invention has to be specific, substantial and credible. Thus, the claim fails to produce a useful result to form the basic statutory subject matter under 101.

Claim 6 recites "clustering the string with a cluster associated with the Y+2 n-gram group". Such limitation of the claim does not produce a tangible result. Applicant should duly note that the tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement requires that the claim must set forth a practical application of that judicial exception to produce a real-world result. For the analysis provided above, claim 6 fails to produce a tangible and useful result to form the basis statutory subject matter under 35 USC 101.

The dependent claims 7-9 are rejected for fully incorporating the errors of their respective base claims by dependency.

The claim 6, recites ***"if the string has not been associated with a cluster with this value of Ts: for every unique set of Y +1 n-grams Tuy in the string T1...R, except S: clustering the string with a cluster associated with the Y = 2 n-gram group Ts-Tuy"***. These limitations do not produce any useful, concrete and tangible result. Actually this limitation does not produce a result under the condition when the string has been associated with a cluster to form the statutory subject matter under 35 USC 101.

The dependent claims 7 and 8 are rejected for fully incorporating the errors of their respective base claims by dependency.

Claim 10 is directed to an abstract idea that is not tied to a technological art, environment

or machine which would result in a practical application producing a concrete, useful, and tangible result to form the basis of statutory subject matter under 35 U.S.C. 101. Even though there is physical transformation performed in the claim, however, such physical transformation does not produce a useful, concrete and tangible result. The claim 10 recites, "otherwise, do nothing". Such a limitation does not produce any useful, concrete and tangible result. Applicant is advised to amend the claims to show the series of steps as recited in claim 1 produce a tangible result ***being executed*** by a general-purpose computer in order to correct the above indicated deficiencies.

The dependent claims 11-12 are rejected for fully incorporating the errors of their respective base claims by dependency.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liddy et al., (hereinafter "Liddy") US Patent no. 6,006,221.

As to claim 4, Liddy discloses the claimed "clustering a plurality of strings, each string including a plurality of characters" (decomposed the text into a sequence of character strings, where each string contains n adjacent characters from the text, col.20, lines 57-61; col.23, lines 30-41); "identifying unique n-grams in each string" (determining a combination of n-gram and word frequency analysis, col.23, lines 45-58); "clustering each string with zero or more clusters

associated with low frequency n-grams from that string; and clustering each string with zero or more clusters associated with low-frequency pairs of high frequency n-grams from that string" (the combination of n-gram and word frequency analysis, col.6, lines 53-59; col.17, lines 7-10; col.14, lines 1-4).

As to claim 5, Liddy discloses the claimed "where a string does not include any low-frequency pairs of high frequency n-grams, associating that string with clusters associated with triples of n-grams including the pair" (col.6, lines 53-59; col.17, lines 7-10; col.14, lines 1-4; col.13, lines 33-47.).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean M. Corrielus whose telephone number is (571) 272-4032. The examiner can normally be reached on 10 hours shift.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jean M Corrielus
Primary Examiner
Art Unit 2162

April 13, 2007